RECEIVED
CENTRAL FAX CENTER
OCT 2 4 2005

BLAKELY SOKOLOFF TAYLOR & ZAFMAN
A LIMITED LIABILITY PARTNERSHIP INCLUDING LAW CORPORATIONS

1279 OAKMEAD PARKWAY
SUNNYVALE, CALIFORNIA 94085
(408) 720-8300 (Telephone)
(408) 720-8383 (Facsimile)

FACSIMILE TRANSMITTAL SHEET

Deliver to: Examiner Stefan Stoynov, Art Unit 2116
Firm Name: U.S. Patent & Trademark Office
Fax Number: 571-273-8300
From: Michael J. Mallie **Operator:** Anne Collette
Date: October 24, 2005
App. No.: 10/027,396
No. of pages: 25 (including cover sheet)
Client/Matter: 42390P13462 **Docket Date:** 10/23/2005 **Atty:** CTF

Dear Examiner:

Please find the following document(s) attached:

1) Transmittal Form (1 page)
2) Fee Transmittal (1 page)
3) Appeal Brief (22 pages)

RECEIVED
OIPE/IAP
OCT 2 5 2005

Thank you.

CERTIFICATE OF TRANSMISSION
I hereby certify that this correspondence is being facsimile transmitted to the U.S. Patent and Trademark Office on the date shown below.
By: Anne Collette Anne Collette — Date: October 24, 2005

CONFIDENTIALITY NOTE

IF YOU EXPERIENCE ANY DIFFICULTY IN RECEIVING THE ABOVE PAGES, PLEASE CALL (408) 720-8300 AND ASK FOR THE OPERATOR NAMED ABOVE.

RECEIVED
CENTRAL FAX CENTER
OCT 2 4 2005

PTO/SB/21 (09-04)
Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	10/027,396
Filing Date	December 21, 2001
First Named Inventor	Barnes Cooper
Art Unit	2116
Examiner Name	Stefan Stoynov
Attorney Docket Number	42390P13462
Total Number of Pages in This Submission (not including this page)	23

ENCLOSURES *(Check all that apply)*

- [x] Fee Transmittal Form
  - [ ] Fee Attached
- [ ] Amendment/Reply
  - [ ] After Final
  - [ ] Affidavits/declaration(s)
- [ ] Extension of Time Request
- [ ] Express Abandonment Request
- [ ] Information Disclosure Statement
- [ ] Certified Copy of Priority Document(s)
- [ ] Reply to Missing Parts/ Incomplete Application
  - [ ] Reply to Missing Parts under 37 CFR 1.52 or 1.53
- [ ] Drawing(s)
- [ ] Licensing-related Papers
- [ ] Petition
- [ ] Petition to Convert to a Provisional Application
- [ ] Power of Attorney, Revocation Change of Correspondence Address
- [ ] Terminal Disclaimer
- [ ] Request for Refund
- [ ] CD, Number of CD(s) ______
  - [ ] Landscape Table on CD
- [ ] After Allowance Communication to TC
- [x] Appeal Communication to Board of Appeals and Interferences **
- [ ] Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
- [ ] Proprietary Information
- [ ] Status Letter
- [ ] Other Enclosure(s) (please Identify below):

Remarks
** An Appeal Brief pursuant to 37 C.F.R. § 41.37 is attached.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Blakely, Sokoloff, Taylor & Zafman LLP		
Signature	[signature]		
Printed name	Michael J. Mallie		
Date	October 24, 2005	Reg. No.	36,591

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature	Anne Collette		
Typed or printed name	Anne Collette	Date	October 24, 2005

Effective on 12/08/2004.
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL For FY 2005

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT ($) 500.00

Complete if Known	
Application Number	10/027,396
Filing Date	December 21, 2001
First Named Inventor	Barnes Cooper
Examiner Name	Stefan Stoynov
Art Unit	2116
Attorney Docket No.	42390P13462

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): ____

☑ Deposit Account Deposit Account Number: 02-2666 Deposit Account Name: Blakely, Sokoloff, Taylor & Zafman LLP

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☑ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee

☑ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☑ Credit any overpayments

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

	FILING FEES		SEARCH FEES		EXAMINATION FEES		
Application Type	Fee ($)	Small Entity Fee ($)	Fee ($)	Small Entity Fee ($)	Fee ($)	Small Entity Fee ($)	Fees Paid ($)
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	Fee ($)	Small Entity Fee ($)
Each claim over 20 or, for Reissues, each claim over 20 and more than in the original patent	50	25
Each independent claim over 3 or, for Reissues, each independent claim more than in the original patent	200	100
Multiple dependent claims	360	180

Total Claims ____ - 20 or HP = Extra Claims ____ x Fee ($) 50 = Fee Paid ($) ____

HP = highest number of total claims paid for, if greater than 20

Indep. Claims ____ - 3 or HP = Extra Claims ____ x Fee ($) 200 = Fee Paid ($) ____

HP = highest number of independent claims paid for, if greater than 3

Multiple Dependent Claims: Fee ($) ____ Fee Paid ($) ____

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets ____ - 100 = Extra Sheets ____ / 50 = Number of each additional 50 or fraction thereof ____ (round up to a whole number) x Fee ($) ____ = Fee Paid ($) ____

4. OTHER FEE(S)

	Fees Paid ($)
Non-English Specification, $130 fee (no small entity discount)	
Other: Filing a brief in support of an appeal (Fee Code 1402)	500.00

SUBMITTED BY

Signature	[signature]	Registration No. (Attorney/Agent) 36,591	Telephone 408-720-8300
Name (Print/Type)	Michael J. Mallie		Date October 24, 2005

RECEIVED
CENTRAL FAX CENTER
OCT 2 4 2005

42390P13462

Patent

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:	
Barnes Cooper	Examiner: Stoynov, Stefan
Serial No.: 10/027,396	Art Unit: 2116
Filing Date: December 21, 2001	
For: THERMAL MANAGEMENT FOR FOR COMPUTER SYSTEMS RUNNING LEGACY OR THERMAL MANAGEMENT OPERATING SYSTEMS	

Mail-Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

Sir:

Appellants submit herewith an Appeal Brief as required by 37 C.F.R. § 41.37.

This Appeal Brief is in response to the Final Office Action dated May 23, 2005.

I. REAL PARTY IN INTEREST

The real party in interest is Intel Corporation, a corporation of Delaware.

CERTIFICATE OF TRANSMISSION	
I hereby certify that this correspondence is being facsimile transmitted to the U.S. Patent and Trademark Office on the date shown below.	
By: Anne Collette Anne Collette	Date: October 24, 2005

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences known to Appellants which relate to, directly affect or are directly affected by the Board's decision in this appeal.

III. STATUS OF THE CLAIMS:

Claims 1-30 are pending in this application.

Claim 11 stands finally rejected under 35 U.S.C. § 101 as being considered to be directed to non-statutory subject matter.

Claims 4-8, 14-18 and 24-28 stand finally rejected under 35 U.S.C. § 112, second paragraph as being considered to be indefinite for failing to particularly point out and distinctly claim the subject matter that applicant regards as the invention.

Claims 1, 11 and 21 stand finally rejected under 35 U.S.C. § 103(a) as being considered to be unpatentable over U.S. Patent No. 6,112,164 to Hobson ("Hobson") in view of U.S. Patent No. 6,118,306 to Orton et al. ("Orton"). It also appears, even though it is not specifically stated on the Office Action, that claims 2-3, claims 12-13 and claims 22-23 are also rejected on the same grounds.

Claims 9, 10, 19, 20, 29 and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The rejections of claims 1-8, 11-18 and 21-28 are appealed. These claims are reproduced in the attached Claims Appendix.

IV. STATUS OF AMENDMENTS:

To the best of Appellant's knowledge, no amendments have been filed subsequent to the Final Office Action.

A copy of the claims on appeal (claims 1-8, 11-18 and 21-28) is provided in the attached Claims Appendix, which includes all currently pending claims.

V. SUMMARY OF THE INVENTION:

Regarding independent claims 1, 11, and 21, a method, computer program product or system may include, or may include instructions to cause, invoking (block 420, pg. 10, paragraph [0039]) a system management interrupt (SMI) handler (element 310, e.g. pg. 8, paragraph [0032]) in response to an SMI (pg. 8, paragraph [0032]), determining (pg. 10, para. [0039], element 430) a thermal state of a processor by the SMI handler, and interacting or causing interaction (pg. 11, para. [0040]) between the SMI handler and one of a performance state control applet (pg. 9, para. [0034], element 330, block 460) and a thermal driver (element 320, pg. 9, para. [0033], block 450) in a thermal management operating system (OS) to determine whether to transition the processor to one of a low power state and a high power state based on the thermal state according to a native performance control status (pg. 8, para. [0032], pg. 11, para. [0040]).

Regarding dependent claims 4, 14 and 24, which depend from and further limit claims 1, 11 and 21, respectively, interacting includes if the native performance control is enabled, interacting with the thermal management OS, and if the native performance control is not enabled, interacting with the performance state control applet (pg. 11, para. [0040]).

VI. GROUNDS OF REJECTION:

A. Claim 11 stands finally rejected under 35 U.S.C. § 101 as being considered to be directed to non-statutory subject matter.

B. Claims 4-8, 14-18 and 24-28 stand finally rejected under 35 U.S.C. § 112, second paragraph as being considered to be indefinite for failing to particularly point out and distinctly claim the subject matter that applicant regards as the invention.

C. Claims 1, 11 and 21 stand finally rejected under 35 U.S.C. § 103(a) as being considered to be unpatentable over U.S. Patent No. 6,112,164 to Hobson in view of U.S. Patent No. 6,118,306 to Orton. It also appears, even though it is not specifically stated on the Office Action, that claims 2-3, claims 12-13 and claims 22-23 are also rejected on the same grounds.

VII. ARGUMENT:

A. Claim 11 is directed to statutory subject matter and meets the requirements of 35 U.S.C. § 101

The Final Office Action states that, in view of Applicant's disclosure, specification paragraph 0015, lines 11-21, the medium that is the subject of claim 11 is not limited to tangible embodiments, and is instead defined as including both tangible embodiments and intangible embodiments. In particular, the position taken in the Final Office Action is that program code segments transmitted by a computer data signal embodied in a carrier wave, or signal modulated by a carrier wave, over a transmission medium, processor readable medium including a radio frequency (RF) link, transmission media

such as air, electromagnetic, RF links are intangible, and therefore non-statutory. (Final Office Action, page 2). Applicant respectfully traverses this rejection.

Applicant respectfully submits that all of the claimed media are tangible and therefore the associated claims cover statutory subject matter for at least the following reasons.

Current laws, legal precedent and Examiner Guidelines clearly allow claims in the form of computer readable medium, as recited in claim 11. See *In re Beauregard*, 35 USPQ2d 1383 (CAFC 1995). Further, current laws, legal precedent and Examiner Guidelines clearly allow claims directed to carrier waves and other media recited in the Office Action.

For example, in the Examination Guidelines For Computer-Related Inventions as available on the USPTO web site at URL ***http://www.uspto.gov/web/offices/pac/dapp/mpep_examguide.html***, example claim 13 in the document at URL ***http://www-uspto-gov/web/offices/pac/dapp/pdf/compenex.pdf*** is clearly directed to a computer data signal embodied in a carrier wave (see pg. 37) and provided as an example of statutory subject matter (see e.g. pages 39 "...the data signal does not occur as a natural phenomenon"..."absent object evidence to support the position that the "data signal" is a natural phenomenon, such a position would be untenable." and page 45 "...the computer medium is embodied on a computer-readable medium—the carrier wave. Thus, claim 13 is a statutory article of manufacture claim." Based on at least the foregoing, the Examiner guidelines clearly show that this type of claim is a *statutory computer program embodied on a computer-readable medium*, where the computer-readable medium is a carrier wave. Thus, the alternative description of machine

accessible media as described at paragraph [0015] in the Specification, clearly describes statutory subject matter.

Further support for this position may also be found in the form of legal precedent. For example, while it is asserted in the Office Action that a signal or "carrier means" is *non-statutory* because it is not "in a tangible medium," there is legal precedent that shows that the view that there is nothing physical (i.e., tangible) about signals is incorrect.

> "These claimed steps of "converting", "applying", "determining", and "comparing" are physical process steps that transform one physical, electrical signal into another. The view that "there is nothing necessarily physical about 'signals' " is incorrect. *In re Taner*, 681 F.2d 787, 790, 214 USPQ 678, 681 (CCPA 1982) (holding statutory claims to a method of seismic exploration including the mathematically described steps of "summing" and "simulating from"). The Freeman-Walter-Abele standard is met, for the steps of Simson's claimed method comprise an otherwise statutory process whose mathematical procedures are applied to physical process steps. "

Arrhythmia Research Technology Inc. v. Corazonix Corp. 22 USPQ2d 1033, 1038 (CAFC 1992).

> "Appellants' claims are not in our view merely directed to the solution of a mathematical algorithm. Though the claims directly recite an algorithm, summing, we cannot agree that appellants seek to patent that algorithm in the abstract. Appellants' claims are drawn to a technique of seismic exploration which simulates the response of subsurface earth formations to cylindrical or plane waves. That that technique involves the summing of signals is not in our view fatal to its patentability. Appellants' claimed process involves the taking of substantially spherical seismic signals obtained in conventional seismic exploration and converting ("simulating from") those signals into another form, i.e., into a form representing the earth's response to cylindrical or plane waves. Thus the claims set forth a process and are statutory within §101.

For at least the foregoing reasons, applicant respectfully submits that 35 U.S.C. § 101 rejection of claim 11 is improper and should be withdrawn.

B. Claims 4-8, 14-18 and 24-28 particularly point out and distinctly claim the subject matter that applicant regards as the invention and meet the requirements of 35 U.S.C. § 112, second paragraph

Claims 4-8, 14-18 and 24-28 depend from claims 1, 11 and 21, respectively. It is stated in the Final Office Action that claims 1, 11 and 21 include alternative language used to describe the interaction between the SMI handler and either a performance state control applet (e.g. an SST applet) or a thermal driver in a thermal management operating system, while claims 4, 14 and 24 imply the presence of both. Claims 5-8, 15-18 and 25-28 are considered to be similarly indefinite based on their dependence from claims 4, 14, and 24, respectively.

Applicant agrees with the statement in the Final Office Action that claims 1, 11 and 21 use alternative language to describe the interaction between the SMI handler and the performance state control applet or the operating system and with the statement that claims 4, 14 and 24 imply the presence of both. Applicant disagrees, however, with the statement that these are contradictory.

For some embodiments, for example, the SMI handler may interact with either the performance state control applet or the operating system even where both of them are present.

It will be noted that a similar argument was presented in the amendment and response filed March 14, 2005 to address an identical rejection set forth in the first Office Action mailed December 12, 2004. While the rejection was maintained in the Final Office Action, there was no acknowledgment of the argument presented, and no grounds provided as to why the rejection was maintained.

For at least the foregoing reasons, the rejection of claims 4-8, claims 14-18 and claims 24-28 under 35 U.S.C. § 112, second paragraph is improper and should be withdrawn.

C. Claims 1-3, 11-13 and 21-23 are patentably distinguished under 35 U.S.C. § 103(a) over Hobson and Orton, alone or in combination

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See e.g. M.P.E.P. § 2143.

Appellant respectfully traverses the § 103(a) rejection of claims 1-3, 11-13 and 21-23 over Hobson in view of Orton. A *prima facie* case of obviousness has not been established, at least because the combination of Hobson and Orton, were such a combination to be made, fails to teach or suggest at least the claimed feature of interacting between the SMI handler and one of a performance state control applet and a thermal driver in a thermal management operating system (OS) to determine whether to transition the processor to one of a low power state and a high power state based on the thermal state according to a native performance control status.

Hobson discloses a computer system thermal management approach including establishing a thermal window having low and high temperature thresholds that are

adjusted to bracket a current temperature if a temperature outside the thermal window is detected. (see e.g. Hobson, Abstract).

It is admitted in the Final Office Action that Hobson does not teach or suggest the claimed interacting between the SMI handler and one of a performance state control applet and a thermal driver in a thermal management operating system (OS) to determine whether to transition the processor to one of a low power state and a high power state based on the thermal state according to a native performance control status.

Orton discloses an approach for changing clock frequency during a low activity state including using storage elements containing different values (see e.g. Orton, Abstract).

It is suggested in the Final Office Action that Orton discloses the claimed feature of interacting between the SMI handler and one of a performance state control applet and a thermal driver in a thermal management operating system (OS) to determine whether to transition the processor to one of a low power state and a high power state based on the thermal state according to a native performance control status.

Applicant respectfully submits that this is not a fair characterization of Orton.

"Native performance control" is defined in the present specification as a feature in some operating systems (OSes) that allows the OSes to manage or control the processor performance state transitions. (Specification, paragraph [0032]). "Native performance control status" is either enabled or not and determines whether the SMI handler interacts with a performance state control applet , such as a SpeedStep Technology (SST) applet or a thermal driver in a thermal management operating

system, such as an ACPI OS driver, to determine whether to transition the processor to one of a low power state and a high power state. (see e.g. Specification, paragraph [0040], claims 1, 11 and 21)).

Orton does not teach or suggest such a native performance control status, much less interacting with one of a performance state control applet and a thermal driver according to such a status.

The Examiner indicates that since "Orton teaches the power management module (may be implemented as part of the operating system and responsible for transitioning the processor to different performance states) (column 8, lines 35-37, lines 47-48), Orton also teaches native performance control status."

Based at least on the definition of native performance control status provided in the specification, this characterization is improper.

Because neither Hobson nor Orton teach or suggest the claimed interacting feature of applicant's invention (interacting between the SMI handler and one of a performance state control applet and a thermal driver in a thermal management operating system (OS) to determine whether to transition the processor to one of a low power state and a high power state based on the thermal state according to a native performance control status), the combination of Hobson and Orton also fails to teach or suggest such a feature.

For at least this reason, the rejection under 35 U.S.C. § 103(a) of claims 1-3, 11-13 and 21-23 is improper and should be withdrawn.

CONCLUSION

For the reasons set forth above, Appellant respectfully solicits the Honorable Board to reverse the Examiner's rejection of claims 1-8, 11-18 and 21-28.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 02-2666 and please credit any excess fees to such deposit account.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Date: October 24, 2005

Michael J. Mallie
Reg. No. 36,591

12400 Wilshire Boulevard
Seventh Floor
Los Angeles, CA 90025-1030
(408) 720-8300

Claims Appendix

1. (Previously Presented) A method comprising:

invoking a system management interrupt (SMI) handler in response to an SMI;

determining a thermal state of a processor by the SMI handler; and

interacting between the SMI handler and one of a performance state control applet and a thermal driver in a thermal management operating system (OS) to determine whether to transition the processor to one of a low power state and a high power state based on the thermal state according to a native performance control status.

2. (Original) The method of claim 1 wherein invoking the SMI comprises: invoking the SMI at predetermined time intervals.

3. (Original) The method of claim 1 wherein determining the thermal state comprises:

reading a sensor indicating temperature of the processor.

4. (Previously Presented) The method of claim 1 wherein interacting comprises:

if the native performance control is enabled, interacting with the thermal management OS; and

if the native performance control is not enabled, interacting with the performance state control applet.

5. (Original) The method of claim 4 wherein interacting with the thermal management OS comprises:

invoking a source language code compatible with the thermal OS by the SMI handler, the source language code indicating availability status of the high power state based on the thermal state, the availability status being available if the thermal state corresponding to a low temperature and being unavailable if the thermal state corresponds to a high temperature;

exiting the SMI handler;

invoking the source language code by the thermal driver;

executing the source language code, the executed source language code notifying a processor object of the availability status of the high power state via a present performance capability structure; and

transitioning the processor to the low power state if the availability status is unavailable and to one of a current state and the high power state if the availability status is available.

6. (Original) The method of claim 5 wherein interacting comprises:

interacting between the SMI handler and the thermal driver in an advanced configuration and power management (ACPI) operating system (OS).

7. (Original) The method of claim 6 wherein invoking the source language code comprises:

invoking an ACPI source language code (ASL).

8. (Previously Presented) The method of claim 4 wherein interacting with the performance state control applet comprises:

transitioning the processor to a last requested performance state in the performance state control applet if the thermal state corresponds to a low temperature;

saving current processor performance state in the performance state control applet if the thermal state corresponds to a high temperature;

transitioning the processor to the low power state if the thermal state corresponds to a high temperature; and

exiting the SMI handler.

9. (Previously Presented) The method of claim 1 wherein, if interacting includes interacting between the SMI handler and the performance state control applet, the method further comprises:

processing a performance state control command using the performance state control applet.

10. (Previously Presented) The method of claim 9 wherein processing the performance state control command comprises:

returning a current processor state if the performance state control command is a get status command;

recording a requested stated if the performance state control command is a set state command and the thermal state corresponds to a high temperature; and

transitioning the processor to a last requested state and recording the current processor state if the performance state control command is a set state command and the thermal state corresponds to a low temperature.

11. (Previously Presented) A computer program product comprises:

a machine useable medium having computer program code embedded therein, the computer program product having:

computer readable program code to invoke a system management interrupt (SMI) handler in response to an SMI;

computer readable program code to determine a thermal state of a processor by the SMI handler; and

computer readable program code to interact between the SMI handler and one of a performance state control applet and a thermal driver in a thermal management operating system (OS) to determine whether to transition the processor to one of a low power state and a high power state based on the thermal state according to a native performance control status.

12. (Original) The computer program product of claim 11 wherein the computer readable program code to invoke the SMI comprises:

computer readable program code to invoke the SMI at predetermined time intervals.

13. (Original) The computer program product of claim 11 wherein the computer readable program code to determine the thermal state comprises:

computer readable program code to read a sensor indicating temperature of the processor.

14. (Previously Presented) The computer program product of claim 11 wherein the computer readable program code to interact comprises:

computer readable program code to interact with the thermal management OS if the native performance control is enabled; and

computer readable program code to interact with the performance state control applet if the native performance control is not enabled.

15. (Original) The computer program product of claim 14 wherein the computer readable program code to interact with the thermal management OS comprises:

computer readable program code to invoke a source language code compatible with the thermal OS by the SMI handler, the source language code indicating availability status of the high power state based on the thermal state, the availability status being available if the thermal state corresponding to a low temperature and being unavailable if the thermal state corresponds to a high temperature;

computer readable program code to exit the SMI handler;

computer readable program code to invoke the source language code by the thermal driver;

computer readable program code to execute the source language code, the executed source language code notifying a processor object of the availability status of the high power state via a present performance capability structure; and

computer readable program code to transition the processor to the low power state if the availability status is unavailable and to one of a current state and the high power state if the availability status is available.

16. (Original) The computer program product of claim 15 wherein the computer readable program code to interact comprises:

computer readable program code to interact between the SMI handler and the thermal driver in an advanced configuration and power management (ACPI) operating system (OS).

17. (Original) The computer program product of claim 16 wherein the computer readable program code to invoke the source language code comprises:

computer readable program code to invoke an ACPI source language code (ASL).

18. (Previously Presented) The computer program product of claim 14 wherein the computer readable program code to interact with the performance state control applet comprises:

computer readable program code to transition the processor to a last requested performance state in the performance state control applet if the thermal state corresponds to a low temperature;

computer readable program code to save current processor performance state in the performance state control applet if the thermal state corresponds to a high temperature;

computer readable program code to transition the processor to the low power state if the thermal state corresponds to a high temperature; and

computer readable program code to exit the SMI handler.

19. (Previously Presented) The computer program product of claim 11 wherein, if interacting includes interacting between the SMI handler and a performance state control applet, the computer program product further comprises:

computer readable program code to process a performance state control command using the performance state control applet.

20. (Previously Presented) The computer program product of claim 19 wherein the computer readable program code to process the performance state control command comprises:

computer readable program code to return a current processor state if the performance state control command is a get status command;

computer readable program code to record a requested stated if the performance state control command is a set state command and the thermal state corresponds to a high temperature; and

computer readable program code to transition the processor to a last requested state and recording the current processor state if the performance state control command is a set state command and the thermal state corresponds to a low temperature.

21. (Previously Presented) A system comprising:

a processor;

a memory coupled to the processor to store a thermal management module, the thermal management module including a system management interrupt (SMI) handler and a thermal management operating system (OS), the thermal management module, when executed, causing the processor to:

invoke a system management interrupt (SMI) handler in response to an SMI,

determine a thermal state of a processor by the SMI handler, and

interact between the SMI handler and one of a performance state control applet and a thermal driver in a thermal management operating system (OS) to determine whether to transition the processor to one of a low power state and a high power state based on the thermal state according to a native performance control status.

22. (Original) The system of claim 21 wherein the thermal management module causing the processor to invoke the SMI causes the processor to:

invoke the SMI at predetermined time intervals.

23. (Original) The system of claim 21 wherein the thermal management module causing the processor to determine the thermal state causes the processor to:

read a sensor indicating temperature of the processor.

24. (Previously Presented) The system of claim 21 wherein the thermal management module causing the processor to interact causes the processor to:

interact with the thermal management OS if the native performance control is enabled; and

interact with the performance state control applet if the native performance control is not enabled.

25. (Original) The system of claim 24 wherein the thermal management module causing the processor to interact with the thermal management OS causes the processor to:

invoke a source language code compatible with the thermal OS by the SMI handler, the source language code indicating availability status of the high power state based on the thermal state, the availability status being available if the thermal state corresponding to a low temperature and being unavailable if the thermal state corresponds to a high temperature;

exit the SMI handler;

invoke the source language code by the thermal driver;

execute the source language code, the executed source language code notifying a processor object of the availability status of the high power state via a present performance capability structure; and

transition the processor to the low power state if the availability status is unavailable and to one of a current state and the high power state if the availability status is available.

26. (Original) The system of claim 25 wherein the thermal management module causing the processor to interact causes the processor to:

interact between the SMI handler and the thermal driver in an advanced configuration and power management (ACPI) operating system (OS).

27. (Original) The system of claim 26 wherein the thermal management module causing the processor to invoke the source language code causes the processor to:

invoke an ACPI source language code (ASL).

28. (Previously Presented) The system of claim 24 wherein the thermal management module causing the processor to interact with the performance state control applet causes the processor to:

transition the processor to a last requested performance state in the performance state control applet if the thermal state corresponds to a low temperature;

save current processor performance state in the performance state control applet if the thermal state corresponds to a high temperature;

transition the processor to the low power state if the thermal state corresponds to a high temperature; and

exit the SMI handler.

29. (Previously Presented) The system of claim 21 wherein, if the interacting includes interacting between the SMI handler and the performance state

control applet, the thermal management module, when executed, further causes the processor to:

process a performance state control command using the performance state control applet.

30. (Previously Presented) The system of claim 29 wherein the thermal management module causing the processor to process the performance state control command causes the processor to:

return a current processor state if the performance state control command is a get status command;

record a requested stated if the performance state control command is a set state command and the thermal state corresponds to a high temperature; and

transition the processor to a last requested state and recording the current processor state if the performance state control command is a set state command and the thermal state corresponds to a low temperature.